IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Original) A valve system for use in a wellbore, comprising:

an optical fiber extending into a wellbore, the optical fiber adapted to transmit light at varying intensities;

a valve having a variable orifice that has at least one setting between an open and a closed position;

the optical fiber functionally connected to the valve; and

wherein the valve is activated by the light and the setting of the variable orifice is controlled by the intensity of the light.

2. (Original) The valve system of claim 1, wherein the valve comprises a gas lift valve.

3. (Original) The valve system of claim 1, wherein the valve comprises a tubing valve.

4. (Original) The valve system of claim 1, wherein the valve comprises a photovoltaic converter for receiving the light and for converting the light into motive power for the variable orifice.

5. (Original) The valve system of claim 4, wherein output from the photovoltaic converter is coupled to one or more piezo electric devices, operative to provide displacement when activated.

6. (Original) The valve system of claim 4, wherein output from the photovoltaic converter is coupled to an electric motor, coupled to operate the variable orifice.

7. (Original) The valve system of claim 4, wherein output from the photovoltaic converter is coupled to a solenoid, coupled to operate the variable orifice.

8. (Original) The valve system of claim 1, wherein the variable orifice has a plurality of settings between an open and a closed position.

9. (Currently amended) A system for controlling the flow of fluid in a wellbore, comprising:

a gas lift valve having a variable orifice with at least one setting between an open and a closed setting, the gas lift valve being deployed in a wellbore and being adapted to influence the flow of fluid in the wellbore;

an optical fiber functionally connected to the gas lift valve;

a control unit functionally connected to the optical fiber to transmit light through the optical fiber and to the gas lift valve;

the gas lift valve being activated and controlled by the light transmitted through the fiber, the setting of the variable orifice being controlled by the intensity of the light;

a monitoring unit operative to measure one or more parameters at one or more locations within the wellbore; and

the control unit functionally connected to the monitoring unit and to the gas lift valve, wherein the gas lift valve is activated and controlled by the control unit depending on output received from the monitoring unit.

10. (Original) The system of claim 9, wherein the control unit comprises a laser light source to transmit the light through the optical fiber.

11. (Original) The system of claim 9, wherein the gas lift valve comprises a photovoltaic converter for receiving the light and for converting the light into motive power for the variable orifice.

12. (Currently amended) ~~The system of claim 11~~ A system for controlling the flow of fluid in a wellbore, comprising:

a gas lift valve deployed in a wellbore adapted to influence the flow of fluid in the wellbore;

an optical fiber functionally connected to the gas lift valve;

a control unit functionally connected to the optical fiber to transmit light through the optical fiber and to the gas lift valve;

the gas lift valve being activated and controlled by the light transmitted through the fiber, the gas lift valve comprising a photovoltaic converter for receiving the light and for converting the light into motive power for the variable orifice;

a monitoring unit operative to measure one or more parameters at one or more locations within the wellbore; and

the control unit functionally connected to the monitoring unit and to the gas lift valve, wherein the gas lift valve is activated and controlled by the control unit depending on output received from the monitoring unit, wherein output from the photovoltaic converter is coupled to one or more piezo electric devices, operative to provide displacement when activated.

13. (Currently amended) ~~The system of claim 11~~ A system for controlling the flow of fluid in a wellbore, comprising:

a gas lift valve deployed in a wellbore adapted to influence the flow of fluid in the wellbore;

an optical fiber functionally connected to the gas lift valve;

a control unit functionally connected to the optical fiber to transmit light through the optical fiber and to the gas lift valve;

the gas lift valve being activated and controlled by the light transmitted through the fiber, the gas lift valve comprising a photovoltaic converter for receiving the light and for converting the light into motive power for the variable orifice;

a monitoring unit operative to measure one or more parameters at one or more locations within the wellbore; and

the control unit functionally connected to the monitoring unit and to the gas lift valve, wherein the gas lift valve is activated and controlled by the control unit depending on output received from the monitoring unit, wherein output from the photovoltaic converter is coupled to an electric motor, coupled to operate the gas lift valve.

14. (Currently amended) ~~The system of claim 11~~ A system for controlling the flow of fluid in a wellbore, comprising:

a gas lift valve deployed in a wellbore adapted to influence the flow of fluid in the wellbore;

an optical fiber functionally connected to the gas lift valve;

a control unit functionally connected to the optical fiber to transmit light through the optical fiber and to the gas lift valve;

the gas lift valve being activated and controlled by the light transmitted through the fiber, the gas lift valve comprising a photovoltaic converter for receiving the light and for converting the light into motive power for the variable orifice;

a monitoring unit operative to measure one or more parameters at one or more locations within the wellbore; and

the control unit functionally connected to the monitoring unit and to the gas lift valve, wherein the gas lift valve is activated and controlled by the control unit depending on output received from the monitoring unit, wherein output from the photovoltaic converter is coupled to a solenoid, coupled to operate the gas lift valve.

15. (Original) The system of claim 9, wherein the control unit is functionally connected to the monitoring unit through an additional optical fiber.

16. (Original) The system of claim 9, wherein the one or more parameters comprises pressure.

17. (Original) The system of claim 9, wherein the one or more parameters comprises temperature.

18. (Original) The system of claim 9, wherein the one or more parameters comprises flow rate.

19. (Original) The system of claim 9, wherein the gas lift valve controls the injection of an additional fluid into a tubing.

20. (Original) The system of claim 19, wherein the injection of the additional fluid into the tubing aids in extracting the fluid from the wellbore.

21. (Original) The system of claim 19, wherein the additional fluid comprises a gas.

22. (Original) The system of claim 19, wherein the additional fluid comprises a corrosion preventative.

23. (Original) The system of claim 19, wherein the additional fluid comprises a flushing fluid.

24. (Original) The system of claim 19, wherein the additional fluid comprises a diluent fluid.

26. (Original) The system of claim 19, wherein the control unit is functionally connected to an injection plant that injects the additional fluid into the tubing and wherein the control unit controls the conditions under which the additional fluid is injected into the tubing.

27. (Original) The system of claim 26, wherein the control unit controls the conditions under which the additional fluid is injected into the tubing depending on output received from the monitoring unit.

28. (Original) The system of claim 9, further comprising:

a plurality of gas lift valves deployed in the wellbore adapted to influence the flow of fluid in the wellbore;

a control unit functionally connected to the gas lift valves through at least one optical fiber and adapted to transmit light through the at least one optical fiber and to the gas lift valves;

the gas lift valves being activated and controlled by the light transmitted through the fiber;

the control unit functionally connected to the monitoring unit and to the gas lift valves, wherein the gas lift valves are activated and controlled by the control unit depending on output received from the monitoring unit.

29. (Original) The system of claim 28, further comprising:

a plurality of monitoring units;

each monitoring unit functionally connected to the control unit; and

wherein the gas lift valves are activated and controlled by the control unit depending on output from received from the monitoring units.

30. (Original) The system of claim 9, further comprising:

at least one tubing valve functionally connected to the control unit; and

wherein the at least one tubing valve is activated by the control unit depending on output from the monitoring unit.

31. (Original) The system of claim 30, wherein the at least one tubing valve is placed between a production tubing and a production liner.

32. (Original) The system of claim 30, wherein the at least one tubing valve is functionally connected to the control unit via an optical fiber.

33. (Currently amended) A method for controlling the flow of fluid in a wellbore, comprising:

influencing the flow of fluid in a wellbore by deploying a gas lift valve in the wellbore;

functionally connecting the gas lift valve and a control unit to an optical fiber;

transmitting light from the control unit through the optical fiber and to the gas lift valve;

measuring one or more parameters with a monitoring unit at one or more locations within the wellbore;

transmitting output from the monitoring unit to the control unit; and

activating and controlling the gas lift valve to adjust the gas lift valve to a position selected from at least three possible positions, the movement of the gas lift valve depending on the output received by the control unit from the monitoring unit and being in response to the light transmitted by the control unit through the fiber.

34. (Original) The method of claim 33, further comprising receiving the light in a photovoltaic converter and converting the light into motive power for the gas lift valve.

35. (Original) The method of claim 33, wherein the one or more parameters comprises pressure.

36. (Original) The method of claim 33, wherein the one or more parameters comprises temperature.

37. (Original) The method of claim 33, wherein the one or more parameters comprises flow rate.

38. (Original) The method of claim 33, further comprising controlling the injection of an additional fluid into a tubing by use of the gas lift valve.

39. (Original) The method of claim 38, wherein the injection of the additional fluid into the tubing aids in extracting the fluid from the wellbore.

40. (Original) The method of claim 38, wherein the additional fluid comprises a gas.

41. (Original) The method of claim 38, wherein the additional fluid comprises a corrosion preventative.

42. (Original) The method of claim 38, wherein the additional fluid comprises a flushing fluid.

43. (Original) The method of claim 38, wherein the additional fluid comprises a diluent fluid.

44. (Original) The method of claim 38, further comprising functionally connecting the control unit to an injection plant that injects the additional fluid into the tubing and controlling the conditions under which the additional fluid is injected into the tubing by use of the control unit.

45. (Original) The method of claim 44, further comprising controlling the conditions under which the additional fluid is injected into the tubing depending on output received by the control unit from the monitoring unit.

46. (Original) The method of claim 33, further comprising:

deploying a plurality of gas lift valves in the wellbore adapted to influence the flow of fluid in the wellbore;

functionally connecting the control unit to the gas lift valves through at least one optical fiber;

transmitting light from the control unit through the at least one optical fiber and to the gas lift valves;

activating and controlling the gas lift valves depending on the output received by the control unit from the monitoring unit and in response to the light transmitted by the control unit through the fiber.

47. (Original) The method of claim 46, further comprising:

functionally connecting a plurality of monitoring units to the control unit;

activating and controlling the gas lift valves depending on the output received by the control unit from the monitoring units and in response to the light transmitted by the control unit through the fiber.

48. (Original) The method of claim 33, further comprising:

functionally connecting at least one tubing valve to the control unit; and

activating the at least one tubing valve depending on output from the monitoring unit.

49. (Original) The method of claim 48, further comprising deploying the at least one tubing valve between a production tubing and a production liner.

50. (Original) The method of claim 48, further comprising functionally connecting the at least one tubing valve to the control unit via an optical fiber.